Title: Pottery of Native American Puebloan Indians

Developers: Rona Kritzer, Marti Stebbins, Cyresa Bloom

Lesson Grade Level: K- 12 (art lesson / social studies - applicable to grade level)

Length of Lesson: varies according to individual teacher preference.

Park name: Aztec Ruins National Monument

Theme: Pueblo people say the clay remembers the hands that made it and the pot tells the history of the people who used it. Each pot sherd has a history and helps to complete the picture of a people in the absence of a written history. The ancestral Pueblo people created pottery for utilitarian, ceremonial functions and rituals, and trade. The styles of the pottery found at Aztec Ruins had specific relevance to their specific pre-historical, cultural context and intended use.

Essential question: How did the ancestral Pueblos make their pottery? What did they use to paint their pottery, and how did they choose their designs?

This looks like an unusual example of Mesa Verde Black-on-white.

Pottery was produced by a method called coiling and scraping. A clay "snake" is coiled around in a spiral, forming the base to a vessel (a bowl, for instance). Additional "snakes" or coils are added on, creating the basic shape of the vessel. Then the coils are scraped together, erasing all signs of the individual coils. The ancestral Pueblos probably used shaped pieces of wood or gourds as "scrapers" to do this work. Smooth stones were used to "polish" the surfaces of bowls.

Ancestral Pueblo pottery is called Black-on-White. The white is from the color of the clay. The black paint used for the designs was made from boiled plants (like beeweed or tansy mustard) or from crushed rock with iron in it (such as hematite). Paint brushes were made from the fibers of the yucca plant.

Today you can see many examples of our own culture's use of designs. For instance, most of our clothing has some design, pattern, logo, or motto on them. These elements may be important to the wearer or may not mean anything at all. This also holds true for decorations on our tools, dishes, houses, cars, etc. The ancient Pueblo people were no different. They too used designs in their daily life. These designs may have had specific meaning to them or may have just been decoration. Unfortunately, we can't ask them where they got the inspiration for their designs. Modern day Pueblo people have helped archaeologists in explaining some ancient images. Because of their ties with the ancient Pueblo people, modern Pueblo people can give unique interpretations to past designs.

Relevance: In the absence of a written language, the pottery in the Four Corners Region of the American Southwest serves as a testimony to the culture and legacy of the ancestral Pueblo people. This lesson demonstrates how pottery can be a primary source of knowledge in the study of ancient cultures. By examining, drawing, and duplicating designs from the ceramic objects in the Aztec Ruins museum produced by ancient pueblos and through on-site demonstration by modern pueblo potters, students will develop insight into the lives of these peoples.

Museum collections used in this lesson plan:

Site Bulletin: Ceramics at Aztec Ruins

National Education Standards:

NATIONAL STANDARD

Students use subjects, themes, and symbols that demonstrate knowledge of contexts, values, and aesthetics that communicate intended meaning in artworks.

New Mexico Educational Standards:

K-5 Grades:

1. Explore and develop skills using art materials, tools and techniques.
    1. **Kindergarten**
        i. Use a variety of art materials and related skills.
    2. **1st Grade**
        i. Use a variety of art materials and related skills.
    3. **2nd Grade**
        i. Demonstrate increased skill with materials, tools and techniques.
    4. **3rd Grade**
        i. Demonstrate increased skill with materials, tools and techniques.
    5. **4th Grade**
        i. Select a variety of materials, tools and techniques for producing desired artistic results.
    6. **5th Grade**
        i. Select a variety of materials, tools and techniques for producing desired artistic results.
2. Explore connections between the visual arts and other content areas.
    1. **Kindergarten**
        i. Identify and discuss connections between the elements of art and the principles of design in art used in other content areas (e.g, shapes and patterns in math or texture and repetition in science).
        ii. Discuss connections between themes used in visual arts and other content areas (e.g., stories in art and language arts or scientific concepts about the seasons, as shown in art).
    2. **1st Grade**
        i. Identify and discuss connections between the elements of art and the principles of design in art used in other content areas (e.g, shapes and patterns in math or texture and repetition in science).

ii. Discuss connections between themes used in visual arts and other content areas (e.g., stories in art and language arts or scientific concepts about the seasons, as shown in art).

3. **2nd Grade**
   i. Compare selected elements of art (color, form, line, shape, size, space, texture and value) and selected principles of design (balance, contrast, emphasis, movement, pattern, proportion, repetition, rhythm, unity and variety) within other content areas.
   ii. Describe connections between visual arts and other content areas.
4. **3rd Grade**
   i. Compare selected elements of art (color, form, line, shape, size, space, texture and value) and selected principles of design (balance, contrast, emphasis, movement, pattern, proportion, repetition, rhythm, unity and variety) within other content areas.
   ii. Describe connections between visual arts and other content areas.
5. **4th Grade**
   i. Demonstrate understanding by applying art elements (e.g., color, form, line, shape, size, space, texture and value) and principles of design (balance, contrast, emphasis, movement, pattern, proportion, repetition, rhythm, unity and variety) to other content areas.
   ii. Describe relationships between visual art and other content areas.
6. **5th Grade**
   i. Demonstrate understanding by applying art elements (e.g., color, form, line, shape, size, space, texture and value) and principles of design (balance, contrast, emphasis, movement, pattern, proportion, repetition, rhythm, unity and variety) to other content areas.
   ii. Describe relationships between visual art and other content areas.

6th- 8th Grades:

1. Explore and understand the use of art materials and techniques.
   1. **6-8th Grade**
      i. Apply and analyze a variety of materials, tools and techniques for producing art.
2. Apply art concepts to communicate ideas about self, communities, cultures and the world.
   1. **6-8th Grade**
      i. Communicate ideas and points of view to others through discussion of specific works of art.
      ii. Connect personal experience and knowledge of local and global communities as inspiration for expression in visual art.
3. Apply art concepts to communicate ideas about self, communities, cultures and the world.
   1. **6- 8th Grade**
      i. Communicate ideas and points of view to others through discussion of specific works of art.
      ii. Connect personal experience and knowledge of local and global communities as inspiration for expression in visual art

9th-12th Grades:

1. Describe uses and explore the meaning of art objects within diverse cultures, times and geographic locations.
   1. **9th Grade**

i. Interpret the meaning of works and artifacts in terms of the cultures that produced them. This includes the use of apprenticeship systems to maintain cultural heritage and the arts of contemporary artists, who may retain, reinterpret, challenge or critique cultural traditions.
ii. Interpret the meaning of art works or visual culture in terms of the cultures that produced them, including contemporary critiques of the meanings embedded in popular culture (e.g., television, the Internet, video games, movies, etc.).

2. **10th Grade**
   i. Interpret the meaning of works and artifacts in terms of the cultures that produced them. This includes the use of apprenticeship systems to maintain cultural heritage and the arts of contemporary artists, who may retain, reinterpret, challenge or critique cultural traditions.
   ii. Interpret the meaning of art works or visual culture in terms of the cultures that produced them, including contemporary critiques of the meanings embedded in popular culture (e.g., television, the Internet, video games, movies, etc.).
3. **11th Grade**
   i. Interpret the meaning of works and artifacts in terms of the cultures that produced them. This includes the use of apprenticeship systems to maintain cultural heritage and the arts of contemporary artists, who may retain, reinterpret, challenge or critique cultural traditions.

Student Learning Objectives:

After completing the activity, students will be able to:

- Identify the stylistic attributes of Acoma, Jemez, San Ildefonso, and Santa Clara pottery and distinguish between the traditional Acoma, Jemez, San Ildefonso, and Santa Clara pottery design motifs and forms
- Recognize the connection between the objects and their cultural background
- Create and design similar objects decorated with similar stylistic motifs

Background and Historical Context:

In the American Southwest, pottery's prehistory began about A.D. 100, probably with mud lined baskets, and lasted until recorded history began in the sixteenth century. Scientists can date a pot from the tree rings in the wooden timbers of the room where they find it, and figure out trade patterns based on where it traveled. The pottery of the Pueblo Indians of the American Southwest is part of a centuries old tradition. The Anasazi of Mesa Verde and Chaco Canyon, the ancestors of today's Pueblo people, fashioned beautiful pottery to use in everyday life. Their storage bowls, cups and eating bowls were adorned even though their lifespan was short because of the limitations of low heat firing. The Anasazi began making plain gray pottery around A.D. 500 and quickly found the clays and pigments to make a thin, highly fired wared decorated in black. Black decoration appeared as early as 600 and by 850 and the designs on their pottery had become as sophisticated as their society. Also by 850, they were making corrugated pottery for their cookware. By the time the Anasazi were settled in at Chaco, they found clays to make the pure white slips that covered the gray, and they learned to make ever blacker vegetal and mineral paints. Black – on –White remained the predominant style of Anasazi ware through the 1200's. By the 1300's, the Anasazi were gone from the Four Corners region but they weren't lost in Pueblo oral tradition and the pottery tells its own story.

Southwest pottery is one of the most important types of artifacts. The designs on painted pottery changed over time. Archaeologists have been able to define the time period in which a particular design style was probably painted by examining the pottery from sites that have been dated by tree-ring analysis. So archaeologists can now estimate when a site was occupied by studying the pottery found there.

Aztec Ruins Monument contains the remains of prehistoric Anasazi structures. The ruins were named when European settlers mistakenly attributed them to the Aztecs. The largest preserved structure is the West Ruin, a D-shaped great house constructed in the early 1100s. With close to 400 rooms, the site was occupied for over 200 years. Also of note is the Great Kiva, situated in the center of West Ruin's plaza. It was rebuilt in 1934 by Earl Morris, archeologist for the American Museum of Natural History. By 1300 A.D. the Anasazi had vacated the sites and left the river valley for unknown reasons. The potters at Aztec Ruins produced corrugated graywares and painted whitewares. Some of the same designs that are found on whitewares made in other regions and traded into Aztec Ruins are common on the five whiteware styles made here (Sosi, Dogoszhi, Chaco, McElmo and Mesa Verde).

Today, the artists from such Pueblo villages as Acoma, San Ildefonso, Santa Clara, Jemez, and 16 additional pueblos create beautiful artistic pottery, not to use, but to celebrate the culture that has survived for centuries. These pots are still made from the natural clay, cleaned and shaped by hand, without the use of a potter's wheel. They are polished using smooth stones and painted with vegetal and clay slips before being fired under piles of sheep manure or pinion wood.
Acoma, popularly called "Sky City" because of its location atop a 350-foot-high mesa in Western New Mexico is covered with connected adobe homes, great pools in the natural rock and a seventeenth-century church. Acoma is a "living" pueblo and has been continuously occupied since the 12th century.

The Acoma village was well established by the time of the invasion by Coronado and the "Spanish Entrada," ca. 1540. The village remained in a backwash of the Spanish "conquest" until it was brutally brought into the Spanish mainstream in 1599. The pueblo was hostile to Spanish rule and the inhabitants participated in the 1680 Great Pueblo Revolt. Mission San Estevan del Rey, constructed between 1629 and 1641, is the oldest church of European construction remaining in New Mexico. In 1629, when Fray Juan Ramirez came to Acoma, every sack of sand for the adobe had to be carried up the narrow accesses, one step at a time, and every timber for the roof had to be carried from Mount Taylor, thirty miles away. From 1750 to the present, Acoma's standard for fine pottery has been set by the large, thin-walled white olla. Tempered with the ground-up sherds of broken pottery, the surface of a smoothed and unpolished Acoma jar has exceptional matte velvet feel.

According to Acoma legend, the sacred twins led their ancestors to Ako, the magical white rock that would be their home forever. The twins also led them to the whitest, finest clay in all the Southwest. Since the eighteen century, Acoma potters have made thin-walled, large ollas, slipped in pure white and decorated in red and black. Today, authentic Acoma pots are made from local, slate-like clays. Traditionally, the Acomas use both mineral and vegetal based paints for their designs. The characteristic white backgrounds allow the Acoma potters to produce crisp black images, as well as rich polychrome designs. When traditionally fired, these clays produce a very white vessel. After they are fired, these clays also are strong enough to allow the production of very thin walls.

Jemez pueblo lies west of the Rio Grande on Jemez River. Like other neighboring pueblos, their tradition traces their ancestry back to the Four-Corners prehistoric Anasazi people. Anthropologists say that the Jemez people abandoned the making of pottery sometime after the Spanish conquest, buying their utilitarian ware from neighbors. The history of pottery at Jemez is one of absence and rebirth. Today, most of Jemez ware is red. Jemez pots often have flat matte surfaces not soft eggshell luster like that of Acoma. The Jemez speak the *Towa* language, and by this anthropologists can trace some of their lineage to prehistoric times. Some of the present-day Jemez families can trace their heritage back to the pueblo of Pecos, a ruined Towa pueblo a few miles east of Santa Fe. Several potters went back to their ancestral home, so the story goes, and picked up and copied pottery shards found at the ruins and museums. And,

if there is a tradition, this is it. Since pottery making has been reestablished at Jemez, they have produced some fine potters, who are using traditional methods of coiling and firing.

Santa Clara and San Ildefonso have both been known for black pottery for over three centuries. **Santa Clara Pueblo** was first visited in 1541 by part of Francisco Vásquez de Coronado's expeditionary force. In 1680 the inhabitants of Santa Clara took an active part in the Great Pueblo Revolt against the Spanish. The historic section of the pueblo complex consists of one- and two-story adobe houses surrounding two main plazas with two rectangular ceremonial kivas and a church, c. 1918. Santa Clara is a "living" pueblo and is home to a community of highly skilled artisans famous for their black polished and red polychrome pottery. A Santa Clara tradition is the creation of large storage jars with an indented bear paw design. The near-legendary families of Tafoya, Naranjo, Navasie and Gutierrez continue to make some of the finest pots in the world. Margaret Tafoya, the matriarch of Santa Clara Pueblo potters, passed away in February 2001 at the age of 96.

San Ildefonso Pueblo has been occupied since the 14th century and is one of the best known of the New Mexico "living" pueblos. The pueblo contains adobe buildings, ceremonial kivas, a central plaza and a 1905 church built on the remains of a 17th-century mission church. San Ildefonso is famous for its matte and polished black-on-black pottery popularized in the early 20th century by Maria and Julian Martinez. Located in north-central New Mexico, and has produced some of the most famous and innovative hand-coiled potters in North America. **Maria Martinez** of San Ildefonso Pueblo is one of the most famous Indian potters in history. She grew up surrounded by potters and, in 1904, married artist Julian Martinez. The couple demonstrated pottery-making at the 1904 St. Louis World Fair and again at the 1915 San Diego World's Fair. They won "Best of Show" at the New York State Fair in 1925, and "Best of Show" at the Chicago World's Fair eight years later. These were only the first of many awards won for their pottery in the following years.

Museum Collection Items Used in this Lesson Plan:

Collection on view at Aztec Ruins Museum:

Materials Used in this Lesson Plan:

Art making tools and materials: clay and metal scrapers

Junior ranger museum scavenger hunt.

Similar items: Teacher may wish to display photos, textbooks or actual examples of pueblo pottery from southwest pueblo potters. Teacher may also check out pottery (corrugated pot) sherds from AZRU ReplicaTrunk .

Vocabulary:

- Carved: decoration cut deeply into a pot
- Corrugated: pottery with rows of little indentations on its surface.
- Fillet: rope of clay that is coiled on a base to create the walls of a pot.

- Fire cloud: dark smudge on a pt that was fired outdoors caused by a piece of buring fuel touching the pot.
- Fired: baked at a high temperature.
- Greenware: unfired clay obejects, mass-produced in molds.
- Guaco: a paint made by boiling beeweed.
- Heartline: painted arrow leading from the mouth into the chest of an animal motif.
- Incised: fine lines scratched through the surface of an unfired pot.
- Kaolin: a very fine, soft white clay.
- Leather hard: stage of dryness at which an unfired pot is not longer malleable.
- Line break: gap left in an encircling line.
- Melon bowl: rounded bowl with thick, vertical ribs.
- Mudbeads: ceremonial clowns.
- Ollas: Spanish for “pots” often used to carry water and formed at the bottom to fit the bearer’s head.
- Oxidizing atmosphere: the condition in which air is allowed to reach the pot throughout the firing process.
- Paste: mixture of clay and temper.
- Polychrome: painted with various colors.
- Pueblo: Spanish for”people” or “town”. Now the traditional people of the Fio Grande and Jemez River valleys as well as Laguna, Acoma, Zuni, and Hopi.
- Puki: bowl-shaped object used to support the curved bottom of a pot.
- Reducing atmosphere: occurs when oxygen is kept from pottery during firing.
- Sgraffito: decoration scraped very shallowly into a pot’s surface.
- Sherd: piece of broken pottery sometime called shard to reflect the British pronounciation.
- Slip:liquied clay applied over a pt to smooth and/or color it. Some slips have an important chemical reaction with certain paints.
- Smothering: covering the posts with powdered fuel – usually manure - during firing.
- Split rectangles: design element in which a rectangle is divided in half diagonally and each half is decorated differently.
- Temper: gritty material added to clay to prevent a piece from shrinking or breaking as it dries or is fired.
- Turkey eyes: design element consisting of dot encircled by white space bordered by a dark color.
- Yucca: very fibrous evergreen plant that grows throughout the Southwest, used by some potters as a paintbrush.
- Polishing stone: used to smooth the surface of the pot prior to applying slip or stain to unfired pot.
- Scraper: curved tool usually made from a gourd to smooth and shape a coil pot.
- Anasazi: in Navajo language means “enemy ancestors” not simply “Old Ones” as early archeologists thought it meant.
- Hisatsinom: Hopi word for “Long Ago People”
- Reconstruction: in prehistoric pottery, a reconstructed pot (one that has been broken and pasted back together) is considered as valuable as an intact pot, providing it is complete.
- Restoration: many intact pots have stress cracks. Intact pots might be stabilized. A restored pot has missing pieces filled in and replaced. Many experts prefer patching to be obvious, so you can tell new from old at a glance.

Tips for Teachers:

Lesson Implementation Procedures:

Activity 1 – Introduction: Talk will include information pertinent to Aztec Ruins and the tremendous variety of pottery styles available from the excavated site due to the trade environment that was prevalent at the site in the P1,P2 and P3 periods.

Activity 2 – Answer the “essential question” and explore design motifs: After familiarizing yourselves online with the artistry of the modern pueblos, which of the modern pueblos pottery most closely exemplifies the ancient puebloan pottery we have observed at Aztec Ruins

Activity 3 – Design items using their own arrangement of motifs:

Construct a stylistically inspired pot you most wish to emulate. This can be achieved through drawing with pencil on paper or by using clay to form your object as per the demonstration.

Wrap Up Activity and Evaluation:

Demonstration by master potters: Florinda and Leeland Vallo from Acoma Pueblo. If potters are unavailable show DVD of them working in the museum and talking about their work and the people of the Acoma Pueblo.

Extension and Enrichment Activities:

Extension Activity 1:

Native American Coil Pots Lesson Plan

There are 20 Pueblo villages left in the Southwest; there were at one time in history 200. Each of the 20 Pueblos is famous for art and/or crafts and each has a specialty. Maria Martinez lived in the Pueblo of San Ildefonso and she was famous for creating black pottery. Read and skim the magazine about Maria. Mention that, like all Native Americans, Maria respected the earth and its resources. She only took enough DIRT for one pot at a time so that she did not waste it. Remind them to look around at lunch and be aware of what we waste!

Grade Levels:

2-5 grades

Time Required: Three 45 minute lessons

Objectives:

Art History — familiarization with Pueblo Indian arts and crafts, lifestyles, value systems of Native American Pueblos, Maria Martinez and her famous

black pottery

Key Terms — Pueblo, Maria Martinez, black pottery, slip, scoring

Design — understanding the concepts of coil pottery construction

Skills — ability to construct a coil pot

Lesson 1 Procedure:

1. Divide a clay chunk into 3 equal pieces and roll each new chunk into a coil. It takes a little practice, using a forward rolling motion with the hand held straight and using palms and gentle pressure. It works best to stand and use a forward rolling, then lifting, hand motion. When the clay moves toward the edge of the table, lift and move it back, starting over. It does not work well to roll the hands back and forth over the coil. Roll each chunk into a coil, then roll coil up and place in bag.
2. Wet paper towel and drop into bag with coils, write name and section on the tag. Gather ends of bag and put on twist tie. Make sure the whole bag is closed tight.

Lesson 2 Procedure:

1. Pass everyone a paper towel and round slab circle. (Teacher should put last name and class section on bottom of each.) Teacher does a demonstration of scoring and painting slip around top edge of slab. Add coil, pressing gently, pinch off and smooth together ends when it is wrapped around slab and they meet. Build three rows high, and then add some decorative finishes for the last two rows, such as S shapes made from coils, waves made over a finger, or rolling little balls, pinching them flat, and adding them in openings made by the wave designs. Be sure to stress that everything that is added MUST be scored and slipped. Also stress that the clay coil pot should not be picked up. Turn the paper towel as you work to build it, and the shape will not get lopsided.
2. Add two more coils in the same way. There are now three rows high on the slab.
3. The last two rows may be any design we have talked about.
4. Smooth out any cracks by painting water or slip over them.

5. Projects must dry and be fired.

Lesson 3 Procedure:

1. Paint acrylic gloss medium tinted with blue tempera on whole top and sides of coil pot. Do not paint the bottom. Make sure you get into all the crevices with the bristle brushes and acrylic medium. Clean and dry the brushes thoroughly.
2. Gently fan pot till completely dry.
3. Paint the sienna over the whole pot covering the acrylic with sienna. Do not paint the bottom.
4. Teacher wash off the sienna, leaving the brown color in the deeper parts to create an antiqued effect

Extension Activity 2: the lesson provided below was submitted by Marvin Bartel with comments from Judy Decker

Art Submitted by: Justin Kramer
UNIT: Ceramics - Traditional coil - Decorating Techniques - Motif - Symbolism
Lesson: Traditional coil vessels with Sgraffito decoration
Grade Level: Middle School through High School



Sgraffito decoration technique: a technique used to decorate ceramics in which the top layer (slip) has patterns scratched into it, revealing the different-colored layer (clay) beneath

<u>Introduction to Creating a Clay Coil Pot Review methods:</u>

Present an historical overview of ceramics - show various cultures.

Resources:

Slip information from Marvin Bartel

Books:

THE BEGINNER'S BOOK OF POTTERY. PART 1: COIL AND SLAB POTTERY - Coil and slab pottery are covered in this book.

Handbuilt Ceramics: Pinching * Coiling * Extruding * Molding * Slip Casting * Slab Work - Triplett offers a guide to basic techniques, from pinch pots to slapwork, with color illustrations of tools and techniques and instructions for eight projects of planters and pitchers.

Objective: To be able to build a clay coil pot that has the following criteria:

- Control of media--demonstrates good craftsmanship - traditional symmetrical form
- Designed with specific function in mind--container, teapot, etc.
- Emphasizes good design--unity, rhythm, form, and balance.
- Sgraffito design enhances form - Utilizes personal symbolism

Materials:

Clay--approximately 5 lbs (depending on size of pots)
Cloth covered table or board (canvas cloth)
board (8" to 9" wood or plaster bat for carrying pot)
Plastic bag--large enough for storage of work in progress.
Rolling pin.
Clay slip and brush. Contrasting colored slip
Scoring and modeling tools - flexible metal scrapers - wire loop tools
Small container of water to moisten hands.
Circular base pattern--3" to 5" in diameter.
Optional: Cardboard template of pot shape, masking tape, banding wheel.
Optional: tooling foil - modeling tools

Directions:

1. Make A Base
   Flatten clay with rolling pin - 1/2" thick

2. Use Pattern as Guide
   Cut circle - place base on banding wheel (if available)

3. Create a Clay Coil
   From a small ball - roll out clay until 1/2" thick with moistened hands.
   Keep coil round as light rolling motion is used.

4. Joining Clay
   Rough edge of base and coil with scoring tool.
   Apply slip with brush to base.
   Gently press coil to base.

5. Continue to Add Coils
   Place next coil on top of first.
   Use same joining method.
   Optional: Use cardboard template wrapped in masking tape to help control form

6. Shaping the Walls
   The pot's shape may be curved outward or inward depending on placement of coils.
   Alternate: Cut 1/2 thick slabs into approximately one inch wide strips (thick slab method). Add an thin slabs as post progresses. This is close to the Korean method of construction.
   Optional: Use cardboard template wrapped in masking tape to "waterproof" some what. Use template and metal scarper to control pot shape on banding wheel.

7. Slip Sgraffito: Apply contrasting colored slip to surface of leatherhard clay and allow to slip dry. Use wire loop tools to engrave design in clay. Carve designs while still leatherhard (to avoid dust) Bisque fire - optional - clear glaze.

8. Embellish with foil tooling accents.

Alternate Forming Methods:

1. Press mold - pressing clay into bowl shape (using plastic wrap or paper separator) - making two bowls then fusing seam together. Add neck and foot to vessel.
2. Shape coils around a balloon to help control shape.

Assessment:

Student is able to:

- Describe the coil pot building process and apply this understanding to creating an actual coil pot.
- Demonstrate good craftsmanship through the final appearance and construction of the pot
- Create personal symbols and unified design with sgraffito decorating technique.

Rubric Revised from Marianne Galyk

Assessment Rubric							
Student Name:						**Class Period:**	
Assignment: Traditional Coil Vessel - Sgraffito decoration.						**Date Completed:**	
Circle the number in pencil that best shows how well you feel that you completed that criterion for the assignment.	Excellent	Good	Average	Needs Improvement	Other	Rate Yourself	Teacher's Rating

Criteria 1 – Sketches showing use of elements and principles of design- motifs/symbolism planned and researched	10	9	7-8	6	0-5		
Criteria 2 – Traditional coil vessel - symmetry - functional form - smooth surface.	10	9	7-8	6	0-5		
Criteria 3 – Symbolism and motifs enhance form - clearly etched in surface - slip evenly applied.	10	9	7-8	6	0-5		
Criteria 4 – Effort: took time to develop idea & complete project? (Didn't rush.) Good use of class time?	10	9	7-8	6	0-5		
Criteria 5 – Craftsmanship – Neat, clean & complete? Skillful use of the art tools & media?	10	9	7-8	6	0-5		
Total Possible: 100 points (Average score x 10)						YOUR TOTAL	Grade

Note from Justin: I use a mid-fire terracotta clay (fires to a earthy red colour). When the students have finished handbuilding and the clay is leather hard they apply a coloured slip. The coloured slip is made from white earthenware (usually dried pieces leftover from other projects that is put into a blender with water to make the slip). Added to the white slip is a clay body stain - you can get a range of colours including blues, reds, oranges, yellow, green, etc. This is applied thinly onto the surface. It is easier and healthier to scratch into the surface of the clay while it is still leather hard - i.e. before it is completely dry this avoids making fine dust.

Note from Judy Decker: I didn't want to gamble with my limited knowledge chemistry and problems with "fit".... I bought Amaco slips. The natural black is a rich brownish black. Jet black is a bluer black. When I wanted a pure black, I bought black underglaze which worked similar to

black slip. I used brown, white, blue and black Amaco slips. They come in powdered form and you mix what you need. The underglazes come in 16 oz. containers in liquid form. I used black, white, blue underglaze the same way as slip (as the blue underglaze was also a darker blue - more towards cobalt that the slip).

How to make Slip from Marvin Bartel: I often use several colored slips that are put on the pot while clay is soft or no harder than leatherhard (for satisfactory slip adhesion). To encourage students to think artistically, I assign them to to use at least three different size sharpened stick points for line variation when scratching their designs, patterns, motifs, etc on the clay. No pin point tools are allowed on their first efforts because the glazing hides it too much when the lines are too thin. I encourage bold, simple, and fairly quick approaches until they see some finished results.

In my work, my favorite drawing tool is a quarter inch diameter wood dowel rod, not pointed, but left with a square cut end. When I draw with the corner of the square cut end, it gives line thickness variation adding movement and life to the lines. I only work on wet clay to avoid dust. I leave the burrs around the scratches. Before glazing, I rub the burrs off of the bisque with a small piece of broken kiln shelf or a hard piece of broken brick. Bisque dust is not so fine and is much less apt to get airborne and hazardous to breath.

I show no examples, but I have students practice on clay scrap before doing it on the projects. For ideas, they make sketches and make lists about themselves. We study cultures as a follow up after they have fired some work. Our work is to express ourselves and our culture just as their work expresses themselves their culture.

Simple slip recipes I use:
Since slip does not melt, you do not need to be accurate for slip as you would for glaze recipes - use any convenient measuring device.

Brown
1 scoop of red iron oxide
3 scoops of the same clay used for the pots (dry scrap is okay)
Put it in water. Let it set quietly until the clay is mushy. Stir until thick as coffee cream.

Blue
1 spoon cobalt carbonate or oxide
9 spoon of dry clay
I add some liquid blue tempera to make it look blue when using - just guess at this.
(Cobalt is toxic if you breath it repeatedly, but it is not too bad to touch)

Copper (green in electric kiln)
1 spoon copper carbonate
6 spoons dry clay

As you notice, some coloring metals are much stronger than others. These can be combined in any way you want to get other colors. Adding rutile is like adding some yellowish color.

I tell students that thick coats (several applications) of slip will look different than thin coats. They should be sure to try both approaches to see what they like better. Sometime thin coats disappear entirely under glazes. Some glazes cover more than others. Thick glazes cover more than thin glazes. By not showing an example first, they have no reason to expect a certain

effect, and I tell them to expect surprises. It never fires the way you expect it to the first time. Their friends will always like it better than they do because friends do not pre-visualize the result before it if fired.

This is an example of a piece with brown slip and a light tone glaze over it. The slip was combed with an old credit card I notched with a scissors. I never buy a tool if I can make it. I often use things they were not intended to be used for.
http://www.goshen.edu/~marvinpb/ex22.htm

VARIATION using wax

Paint a slip design on the leatherhard or softer piece.
When the slip firms to leatherhard, cover the area with wax resist (available from ceramic suppliers - it is wax emulsified in water). When the wax dries, at leatherhard stage scratch additional lines, hatching, etc.
Paint with a different colored slip. Give it several slip coats. Slip that is on top of the wax will rub off after firing before glazing.

bartelart.com

How to To Make Black Slip - from Marvin Bartel Black is tricky to make using oxides - easier with stains.

I do not use a black slip, but if I were going to make one I might start with 1 part cobalt oxide (a strong blue colorant) with 9 parts red iron oxide (a less powerful brown colorant) and 20 parts clay to make it stick to wet pots (this is not for bisque). If you want it to look black when you are using it, just add india ink or black tempera. These burn out entirely during firing.

If it is not dark enough after firing, use less clay (some clay is needed for adhesion).

If it is too blue, add iron or subtract cobalt.

If it is too brown, add cobalt or subtract iron.

You will note that these colors are opposites on the a color wheel - so it is a matter of neutralizing opposites to get black.

If you put glaze over this type of black slip, it may turn blue (this is the tricky part).

I have a good black glaze that is simply a medium dark brown glaze with 6 percent cobalt added to make it black. When I overlap or dilute it with another glaze, it turns blue. I use it for a night sky background for my dream pieces.

One part black nickel oxide with two parts clay might might also work for black slip but probably just grey. It may turn a bit green, so some red iron oxide might kill the green. This black could be combined with the cobalt and iron black to make slip that is less likely to deviate under glazes.

Using a color inclusion stain (like Mason stain), one should be able to mix black stain with just enough clay to make it stick to the wet pots. Probably 1 part black stain and 2 parts clay.

Stains cost more because they are oxides that have been prefired with silicates and then ground back to a powder for our use. This stabilizes the color so it does not change much when we fire it. What you see is what you get.

Resources:

Lister, Robert H. and Lister, Florence C. : Anasazi Pottery *Ten Centuries of Prehistoric Ceramic Art in the Four Corners Country of the Southwestern United States,* Maxwell Museum of Anthropology, University of New Mexico Press, 1978

Barry, John W.: American Pottery An Identification and Value Guide, Books Americana, Florence, Alabama, 1981

Trimble, Stephen: Talking with the Clay, The Art of Pueblo Pottery in the 21st Century, 20th Anniversary Revised Edition, School for Advanced Research Press, Santa Fe, New Mexico, 2007

Haynes, Allan and Blom, John: Southwestern Pottery Anasazi to Zuni, Northland Publishing, April, 1997

Lamb, Susan: A Guide to Pueblo Pottery,Western National Parks Association, Tuscon, AZ, 1996

Hayes-Gilpin, Kelley: A Quick Field Guide to Pottery Sherds in the Southwest, Western National Parks Association, Tuscon, AZ, 2006

Acoma: Pueblo in the Sky, Pueblo stories & Storytellers

DVD: Classic Maria Martinez, A National Park Service Film

DVD: In house Interview of Flo and Lee Vallo recorded while working on their pottery at Aztec Ruins

http://www.toh-atin.com/pottery

http://www.nps.gov/history/nr/travel/amsw/sw34.htm

http://www.crowcanyon.org/educationproducts/archaeologists_online/02_new.asp

Site Visit:

Pre visit: Before your visit have their students acquaint themselves with Aztec Ruins National Monument on the institution's National Park website: www.nps.gov\aztecruins for an overview and/or brochures and other written/visual materials about the site. Ask the class to come up with questions to guide the visit. Work with park interpretive rangers to arrange the visit with challenging activities. The more research students do the better. Since Chaco Culture National Park: www.nps.gov/chcu/) and Mesa Verde National Park: www.nps.gov/meve/ are culturally linked, becoming familiar with these sites would enhance students' experience.

Site visit: High School Students will observe demonstration by Flo and Lee Vallo of Acoma Pueblo, Benjamin and Geraldine Toya of Jemez Pueblo, or other arrangements will be made. If talent is not available students will watch a DVD on Maria Martinez, who is a noted potter from San Ildefonso, which will include a demonstration.

At the site, have students select at least two pots to analyze. Provide students with AZRU site bulletin: Ceramics at Aztec Ruins. Provide students with a blank sheet of paper and pencils to make a detailed sketch of a ceramic pot of their choice from the display in the museum.

Students will be given a pre historical to contemporary context of puebloan pottery fabrication

For younger learners, develop a scavenger hunt pottery list to guide them through the Aztec Ruins museum to encourage close observation skills while they find and identify objects.

Related Sites:

- Mesa Verde National Monument. Mesa Verde National Park preserves a spectacular remnant of the Anasazi Indian culture, with magnificent cliff dwellings, pueblo villages and well-preserved pit-houses dating from c. 600-1300 A.D. The remains at Mesa Verde are some of the best-preserved and most dramatic in the United States. www.nps.gov/meve/

- Chaco Canyon was the center of life for Pueblo Indians of the Colorado Plateau from 850 A.D. to 1250 A.D. Around 900 A.D. the people built large multi-storied stone structures on mesa tops and on the canyon floor. This concentration of structures is thought to have served the region as a ritual, administrative and trade center. The pattern of large public buildings with oversized rooms, surrounded by conventional villages, became the standard in Chaco Canyon and spread throughout the region. In the 1200s, change came to Chaco as new construction slowed and Chaco's role as a regional center shifted to new cultural centers such as the Aztec site further north adjacent to the Animas River. www.nps.gov/chcu/

- United States Department of the Interior, Bureau of Land Management
  http://www.blm.gov/co/st/en/fo/ahc/who_were_the_anasazi.html

- http://cpluhna.nau.edu/People/anasazi.htm

Post visit: Continue to discuss pottery and people of the Southwest with specific reference to individual pueblos and the historical envelop of their ancestral past.

For art students:

Teachers conduct a follow up ceramics lessons making pottery in the manner of the ancient puebloans using examples from the AZRU Replica Trunk, photographs from textbooks or online lesson examples.

For social studies students:

Post assessment survey - have students identify pueblo stages of pottery making P1, P2, and P3 using illustrations from the Listers' text, Anasazi Pottery